

WHAT IS CLAIMED IS:

1. A gold based solder composition for assembling, repairing or sizing jewelry comprising of at least about 2% to about 14% by weight of an alloy selected from the group consisting of gallium, indium, and copper in a respective weight ratio of approximately 6:3:1 respectively.

2. A gold based solder composition according to claim 1, further comprising of at least about 25% to about 92% by weight gold and a mixture of about 8% to about 80% silver, about 1% to about 66% copper, about 5% to about 31% zinc and about 0% to about 35% nickel.

3. A gold based solder composition according to claim 1, consisting essentially of about 25% by weight gold.

4. A gold based solder composition according to claim 1, consisting essentially of about 41.6% by weight gold.

5. A gold based solder composition according to claim 1, consisting essentially of about of about 58.3% by weight gold.

6. A gold based solder composition according to claim 1, consisting essentially of about 75% by weight gold.

7. A gold based solder composition according to claim 1, consisting essentially of about 91.6% by weight gold.

8. A gold based solder composition according to claim 1, wherein the solder composition has a melting temperature in the range from about 1000° F to about 1550° F.

9. A gold based solder composition according to claim 1, wherein the solder composition has a melting temperature in the range from about 1100°F to about 1550° F.

10. An alloy for lowering the melting point of gold when combined therewith to provide a solder having a reduced melting point, the alloy comprising of at least about 2% to about 14% by weight gallium, indium and copper in a respective weight ratio of approximately 6:3:1 respectively, said solder composition has a melting temperature in the range from about 1000° F to about 1550° F.

11. A gold based solder composition according to claim 10, further comprising of at least about 25% to about 92% by weight gold and a mixture of about 8% to about 80% silver, about 1% to about 66% copper, about 5% to about 31% zinc and about 0% to about 35% nickel.

12. A gold based solder composition according to claim 11, consisting essentially of about 25% by weight gold.

13. A gold based solder composition according to claim 11, consisting essentially of about 41.6% by weight gold.

14. A gold based solder composition according to claim 11, consisting essentially of about of about 58.3% by weight gold.

15. A gold based solder composition according to claim 11, consisting essentially of about 75% by weight gold.

16. A gold based solder composition according to claim 11, consisting essentially of about 91.6% by weight gold.

17. A gold based solder composition according to claim 11, wherein the solder composition has a melting temperature in the range from about 1100°F to about 1550°F.